

List of All Chemicals

P Lippia javanica (Verbenaceae)

Common name(s)

Lemon Bush; Umsuzwane (Zulu)

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Part	Low PPM	High PPM	StdDev	*Reference
ALANINE	Plant	--	--		Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Zitt., 114: 1588.
Activities (3)					
Antioxidant					Larson, R.A. 1987. Review Article Number 30. The Antioxidants of Higher Plants. Phytochemistry. 27: 969-978.
Cancer-Preventive					Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Oxidant					Larson, R.A. 1987. Review Article Number 30. The Antioxidants of Higher Plants. Phytochemistry. 27: 969-978.
ARGININE	Plant	--	--		Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Zitt., 114: 1588.
Activities (14)					
Antidiabetic?					Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
Antiencephalopathic					Martindale's 29th
Antihepatitic					Martindale's 29th
Antihypertensive					
Antiimpotence					
Antiinfertility 4 g/day					Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antioxidant?					
Aphrodisiac 3 g/day					
Diuretic					
Hypoammonemic					Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
NO-Genic					
Pituitary-Stimulant					
Spermigenic 4 g/day					Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Vasodilator					
ASPARAGINE	Plant	--	--		Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Zitt., 114: 1588.
Activities (2)					
Antisickling	Ekeke, G.I. and Shode, F.O. 1988. Phenylalanine is the Predominant Antisickling Agent in Cajanus cajan Seed Extract. Planta Medica 56(1): 41, 1990.				
Diuretic	HerbalGram No. 17.				
CARYOPHYLLENE	Essential Oil	--	--	*	

Activities (31)

Aldose-Reductase-Inhibitor

Allergenic	
Analgesic	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Antiacne	
Antiasthmatic	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Antibacterial	
Anticariogenic MIC=>1,600 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . <i>J. Agric. Food Chem.</i> 41: 1102-1105.
Antidermatitic	
Antiedemic	Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (<i>Lavandula latifolia</i> Vill.)2). <i>Chem. Pharm. Bull.</i> 38(8): 2283-2284, 1990.
Antifeedant 500 ppm	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Antiinflammatory IC50=100 uM	Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (<i>Lavandula latifolia</i> Vill.)2). <i>Chem. Pharm. Bull.</i> 38(8): 2283-2284, 1990.
Antileishmanic	
Antionychyotic	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Antiproliferant	
Antispasmodic	
Antistaphylococcic	
Antistreptococcic	
Antitumor	Zheng, G-Q., Kenney, P.M., and Lam, L.K.T. Sesquiterpenes From Clove (<i>Eugenia caryophyllata</i>) As Potential Anticarcinogenic Agents. <i>Journal of Natural Products</i> 55(7): 999-1003, 1992.
Antiulcer	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Candidicide	
FLavor FEMA 20-200	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	
Gastroprotective	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Insectifuge	
Irritant	Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Larvicide	
Mosquitocide	
Perfumery	Merck 11th Edition
Pesticide	
Sedative	
Termitifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.

CHOLINE

Plant -- --

Neidlein, R., Staehle, R. 1974. Constituents of *Lippia javanica*. III. *Deutsche Apot. Zit.*, 114: 1588.

Activities (20)

Antialzheimeran 5-16 g/man/day

Antichoreic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticirrhotic 6,000 mg/man/day	
Anticystinuric	
Antidementia	
Antidiabetic	
Antidyskinetic 150-200 mg/kg/man/day	Martindale's 28th
Antihomocysteine	
Antimanic 15-30 g/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antinociceptive	
Antisteatotic	
Cardiodepressant	
Cerebrotonic	
Cholinergic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Hepatoprotective	
Hypotensive	
Ileorelaxant	
Lipotropic	
Memorigenic	
Parasympathomimetic (1/1,000th acetylcholine)	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.

CIS-OCIMENONE	Essential Oil	--	--	Mwangi, J., Addae-Mensah, I., Munavu, R., Lwande, W. 1991. Essential Oils of Kenyan <i>Lippia</i> Species. Part III. Flavour and Fragrance Journal, 6(3): 221-224.
D-GLUCOSE	Plant	--	--	Neidlein, R., Staehle, R. 1974. Constituents of <i>Lippia javanica</i> . III. Deutsche Apot. Zitt., 114: 1588.
Activities (1)				
Antisecretory				
EO	Plant	--	--	Neidlein, R., Staehle, R. 1974. Constituents of <i>Lippia javanica</i> . III. Deutsche Apot. Zitt., 114: 1588.
ICTEROGENIN	Plant	--	--	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
Activities (2)				
Icterogenic	ANON.	1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.		
Toxic	Keeler, R.F. and Tu, A.T. eds.	1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY.	665 pp.	
IPSDIENONE	Essential Oil	--	--	Van Wyk, B. E. and Gericke, N. 2000. People's Plants. Briza Publications, Arcadia, South Africa. 351 pp.
Activities (2)				
Coleopterifuge				Van Wyk, B. E. and Gericke, N. 2000. People's Plants. Briza Publications, Arcadia, South Africa. 351 pp.
Insectifuge				Van Wyk, B. E. and Gericke, N. 2000. People's Plants. Briza Publications, Arcadia, South Africa. 351 pp.
LINALOOL	Essential Oil	--	--	*

Activities (53)

Acaricide C90=<15 ul/l (=	<15 ppm	
Allergenic		
Analgesic		
Anesthetic 0.01-1 ug/ml		
Antiacytcholinesterase		
Antiallergic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.	
Antianaphylactic		
Antibacterial MIC=1,600 ug/ml		
Anticariogenic MIC=1,600 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.	J. Agric. Food Chem. 41: 1102-1105.
Anticolic		
Anticonvulsant 200 mg/kg ipr mus		
Antiedemic		
Antiglutamaergic		
Antihistaminic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.	
Antiinflammatory		
Antileukemic IC50=3.5-4.2 ug/ml	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.	Am J Chin Med, 31(1):37-46.
Antilymphomeric IC50=3.5-4.2 ug/ml	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.	Am J Chin Med, 31(1):37-46.
Antimange		
Antimite		
Antimutagenic		
Antiseptic 5 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)	
Antishock	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.	
Antispasmodic	Buchbauer, G., Jirovetz*, L., Nikiforov, A., Remberg, G., Raverdino, V. 1989. Headspace-Analysis and Aroma Compounds of Austrian Hay-Blossoms (Flores Graminis, Graminis Flos) used in Aromatherapy. J. Ess. Oil Res., 2: 185-191, 1990.	
Antiviral		
Barbituate-Synergist		
Bronchorelaxant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.	
CNS-Depressant		
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.	
Candidstat		
Carminative		
Culicide LC50=156-194 mg/l		
Cytotoxic		
Expectorant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.	
FLavor FEMA 2-40	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry	
Fungicide	Acta Botanica Sinica, 32: 49.	
GABA-nergic		
Hypnotic		
Hypothermic		
Insecticide LC50=156-194 mg/l		
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.	
Irritant	Zebowitz, T. C. Ed, 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.	
Larvicide LC50=156-194 mg/l		
Mosquitofuge > Deet		
Motor-Depressant	Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC	
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.	
Perfumery	Merck 11th Edition	
Pesticide		
Prooxidant	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.	
Sedative ED=1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)	
Sedative 200 mg/kg ipr mus (1% as active as diazepam)		
Termitifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.	
Trichomonicide LD100=600 ug/ml		
Tumor-Promoter		

MYRCENE	Essential Oil	-- --	Van Wyk, B. E. and Gericke, N. 2000. People's Plants. Briza Publications, Arcadia, South Africa. 351 pp.
---------	---------------	-------	--

Activities (22)

ACE-Inhibitor	100 ug/ml			
Aldose-Reductase-Inhibitor	100 ug/ml	Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101.		
Allergenic				
Analgesic		Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.		
Antibacterial				
Anticonvulsant				
Antimutagenic		Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.		
Antinitrosaminic				
Antinociceptive 10-20 mg/kg ipr mus		Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.		
Antinociceptive 20-40 mg/kg scu mus		Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.		
Antioxidant		Jim Duke's personal files.		
Antispasmodic		Jim Duke's personal files.		
Chemopreventive		Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.		
FLavor FEMA 0.5-9		Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry		
Fungicide		Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.		
Hypothermic				
Insectifuge				
Irritant		Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.		
Myorelaxant 100-200 mg/kg				
P450-2B1-Inhibitor IC50=0.14 uM				
Perfumery		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.		
Pesticide				

MYRCENONE	Essential Oil	--	--	Mwangi, J., Addae-Mensah, I., Munavu, R., Lwande, W. 1991. Essential Oils of Kenyan Lippia Species. Part III. Flavour and Fragrance Journal, 6(3): 221-224.
OCIMENE	Plant	--	4000.0 2.29	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.

Activities (2)

Insecticide	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

P-CYMENE	Essential Oil	--	--	*
----------	---------------	----	----	---

Activities (16)

Analgesic	Martindale's 28th
Antiacyetylcholinesterase IC40=1.2 mM	
Antibacillary	
Antibacterial	
Antiflu	
Antirheumatalgic	Martindale's 28th
Antiviral	
FLavor FEMA 12-250	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Herbicide IC50=50 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Insectifuge	Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Laxative	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Pesticide	
Sedative	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Trichomonicide LD100=50 ug/ml	

PROLINE	Plant	--	--	Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Zitt., 114: 1588.
---------	-------	----	----	--

THEVESIDE	Root	--	350.0	Rimpler, H., Sauerbier, H. 1986. Iridoid Glucosides as Taxonomic Markers in the Genera Lantana, Lippia, Aloysia and Phyla. <i>Biochem. Syst. Ecol.</i> , 14(3): 307-310.
THEVESIDE	Leaf	--	300.0	Rimpler, H., Sauerbier, H. 1986. Iridoid Glucosides as Taxonomic Markers in the Genera Lantana, Lippia, Aloysia and Phyla. <i>Biochem. Syst. Ecol.</i> , 14(3): 307-310.
THEVIRIDOSIDE	Root	--	370.0	Rimpler, H., Sauerbier, H. 1986. Iridoid Glucosides as Taxonomic Markers in the Genera Lantana, Lippia, Aloysia and Phyla. <i>Biochem. Syst. Ecol.</i> , 14(3): 307-310.
TRANS-OCIMENONE	Essential Oil	--	--	Mwangi, J., Addae-Mensah, I., Munavu, R., Lwande, W. 1991. Essential Oils of Kenyan Lippia Species. Part III. <i>Flavour and Fragrance Journal</i> , 6(3): 221-224.